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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/392,434 | 09/09/1999 | LARRY L. BRADFORD | ACA6124PDUS | 1107 |

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EXAMINER

SERGEANT, RABON A

ART UNIT

PAPER NUMBER

1711

DATE MAILED: 06/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/392,434

Applicant(s)

BRADFORD ET AL. 22

Examiner

Rabon Sergent

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1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-11, 13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-11, 13, and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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1. A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on May 9, 2003 has been entered.

2. Claims 1-3, 5-11, 13, and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The language, "no more than about 30 mg KOH/g", renders the claims indefinite, because "about 30" encompasses values above 30; therefore, it is unclear if the "no more than" language encompasses values above 30 or if the language modifies "about 30" to exclude values above 30.

The values added by the amendment of May 9, 2003 are referred to within the art as hydroxy numbers, rather than hydroxyl functionality. "Hydroxyl functionality", as it is known in the art, refers to the number of functional groups per molecule.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-3, 5-7, 9-11, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sicken et al. ('965) or Fearing ('534 or '633), each in view of Keppeler et al. ('612).

The primary references disclose the use of oligomeric organophosphorus flame retardants within polyurethane foams and further disclose that the oligomeric flame retardants may be blended with additional flame retardants. See column 4, line 32 within Sicken et al. See column 8, lines 27-34 within the Fearing references.

5. Though the primary references disclose that additional flame retarding agents may be used, the primary references fail to recite specific examples. However, non-halogenated phosphate ester compounds were widely known flame retardants for polyurethane foams at the

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time of invention. This position is supported by the teachings of numerous such flame retardants within Keppeler et al. at column 7, line 33 through column 8, line 67.

6. Therefore, the position is taken that it would have been *prima facie* obvious to select a non-halogenated phosphate ester flame retardant from the numerous flame retardants of Keppeler et al. and employ said flame retardant as a component of the aforementioned, disclosed flame retardant blend of the primary references.

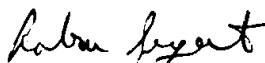
7. Applicants' response has been considered; however, it is insufficient to overcome the prior art rejections. Firstly, the term, "organophosphate", does not exclude the compounds of Fearing, since the compounds of Fearing et al. contain phosphate groups and, therefore, can properly be referred to as organophosphates. Secondly, applicants' argument that Sicken et al. require the use of a compound having a significantly higher hydroxy functionality (number) than the organophosphate of the claims is simply not true. Sicken et al. clearly disclose at column 4, lines 39-41 that the flameproofing agent has a hydroxyl number as low as 30 mg KOH/g, and this value clearly meets applicants' claims. Lastly, in response to applicants' arguments concerning Keppeler et al., the examiner can find no support for the statement that the reference only advocates the use of inorganic flame retardants. The reference is replete with references to organic flame retardants.

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8. Claims 7, 8, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sicken et al. ('965) or Fearing ('534 or '633), each in view of Keppeler et al. ('612), as applied to claims 1-3, 5-7, 9-11, and 13 above, and further in view of Hardy et al. ('035 or '042).

As aforementioned, the combined teachings of Sicken et al. or Fearing and Keppeler et al. are considered to render obvious the combined use of oligomeric and non-oligomeric phosphorous flame retardants; however, the non-hydroxyl group bearing oligomeric species of instant claims 7, 8, 13, and 14 are not disclosed by the primary references. Still, the claimed non-hydroxy group bearing oligomeric species were known at the time of invention, as evidenced by Hardy et al. The position is taken that the oligomeric species of Hardy et al. are close enough in structure and function to those of the primary reference that one would have expected them to function with non-oligomeric flame retardants, as taught by the primary references. Therefore, it would have been obvious to utilize the flame retardants of Hardy et al. with the aforementioned non-oligomeric flame retardants, so as to arrive at the instant invention.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (703) 308-2982.


RABON SERGENT
PRIMARY EXAMINER

R. Sergent
June 19, 2003